**The Internal Revenue Service Needs
Additional Emphasis on Computer
Component Retirement Decisions To Be
Ready For The Year 2000**

September 1999
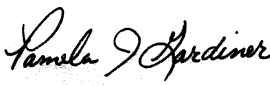
Reference Number: 093506

INSPECTOR GENERAL
for TAX
ADMINISTRATION

September 16, 1999

MEMORANDUM FOR COMMISSIONER ROSSOTTI

FROM: Pamela J. Gardiner
Deputy Inspector General for Audit

SUBJECT: Final Audit Report – The Internal Revenue Service Needs
Additional Emphasis On Computer Component Retirement
Decisions To Be Ready For The Year 2000

This report presents the results of our review of the Internal Revenue Service's (IRS)
Year 2000 (Y2K) efforts to account for retired hardware, software, and data file
components which will not need to be made Y2K compliant; and to resolve uncommitted
components, those for which no decision has been made to retire or convert.

In summary, the method used by the IRS to make Y2K retirement decisions worked
effectively. Information Systems (IS) and field and customer organizations made logical
and sound decisions to retire/convert their components. However, the IRS needs
additional emphasis on computer component retirement decisions in several areas.

We recommended that the Century Date Change Project Office accelerate the decision-
making process to ensure that conversion/retirement decision deadlines were met and
to secure proper funding for upgrading and/or replacing hardware and software. We
also recommended that one division within the IS function review the status of all its
retired components to ensure they are properly classified. In addition, we
recommended that instructions be developed for the transfer of retired components from
service centers to computing centers during mainframe consolidations.

The Director, Office of Information Resources Management, agreed with the facts and
recommendations in the report and agreed to take corrective action. His comments
have been incorporated into the report, where appropriate, and the full text is included
as an appendix.

Copies of this report are also being sent to the IRS managers who are affected by the report recommendations. Please contact me at (202) 622-6510 if you have questions, or your staff may call Scott Wilson, Associate Inspector General for Audit (Information Systems Programs), at (202) 622-8510.

The Internal Revenue Service Needs Additional Emphasis On Computer Component Retirement Decisions To Be Ready For The Year 2000

Table of Contents

Executive Summary

One of the most critical issues the Internal Revenue Service (IRS) faces this year is the need to make its computer systems Year 2000 (Y2K) compliant. The IRS depends on its automated systems to process tax returns, issue refunds, deposit payments, and provide employee access to timely and accurate taxpayer account data.

The objective of this review was to assess the IRS' efforts to account for retired components and to resolve uncommitted components, those for which no convert/retire decision had been made. Components are unique items of software or hardware such as personal computers and programs that run on them.

Results

Our review of the IRS' Year 2000 efforts for retired and uncommitted components showed that Information Systems (IS) and field and customer organizations generally made logical and sound decisions when evaluating the need to retire or convert their computer components.

The IRS needs additional emphasis on computer component retirement decisions in the following areas:

The decision-making process to retire or convert personal computer components in regions and service centers was not completed. Improvements were needed in the following areas:

1. Accelerating the retirement and conversion process for certain personal computer commercial off-the-shelf (COTS) products.

2. Developing cost estimates for the highest priority COTS hardware and software products.

3. Modifying the Integrated Network and Operations Management System (INOMS), the IRS' inventory control system, to allow hardware components to be classified as "stand-alone" (not connected to a network) because they have limited Y2K impact.

If these areas are not addressed, the IRS may not have sufficient time to remedy unforeseen causes of delays in the conversion of personal computer products.

Certain computer components identified as retired within one Information Systems function were not accurately classified. The misclassification of retired components indicated that INOMS did not accurately reflect the number of components being converted as well as the number of components having no Y2K impact in the System Support Division.

Computer components identified as "to be retired" were not removed from active systems prior to service center mainframe consolidation. Computer components identified as "to be retired" were not being removed from active systems and production libraries before being transferred to the Tennessee Computing Center (TCC). *As a result, retired components that are not Y2K compliant may be inadvertently used at a later date by the TCC.*

Summary of Recommendations

The Century Date Change Project Office needed to: 1) accelerate COTS retirement and conversion decisions; 2) develop cost estimates and secure funding for these products; 3) modify INOMS to allow computers to be classified as "stand-alone" (not connected to a network); and 4) develop instructions for the transfer of retired components from the service centers to the computing centers during mainframe consolidations.

The System Support Division needed to ensure its "retired" components are properly classified.

Management's Response: IRS agreed with the facts cited in the report and is taking appropriate corrective actions. The complete response is contained in Appendix IV. Portions of the response related to each recommendation are also included in the report.

To address the personal computer issues, management: will obtain enterprise licenses for standard COTS products, has added an indicator to INOMS for "stand-alone" personal computers, and has finalized the COTS hardware and software budget. Management also plans to review the status of all retired components in the System Support Division. In addition, new procedures will be issued for transferring retired components from service centers to computing centers.

Objective and Scope

The overall objective of this review was to assess the Internal Revenue Service's (IRS) efforts to account for retired components and to resolve uncommitted components, those for which no convert/retire decision had been made. To accomplish this objective, we:

- Evaluated the IRS' efforts to ensure that decisions which had been made to retire Information Systems (IS) and non-IS components were proper.

- Determined whether plans to address the conversion of uncommitted commercial off-the-shelf (COTS) products had been put into place.

This audit was conducted in accordance with *Government Auditing Standards* from February through September 1998.

Details of our audit objective, scope, and methodology are presented in Appendix I. Major contributors to this report are listed in Appendix II.

Background

The Year 2000 presents a significant challenge to IRS operations.

The Year 2000 (Y2K) presents a significant challenge to IRS operations. By January 1, 2000, calculations and other critical computer operations using, manipulating, or updating 2-digit year fields will not work correctly. Affected software, data files and hardware must be modified or replaced to correct Y2K problems.

On November 24, 1997, the Commissioner issued a memorandum entitled <u>Establishment of an IRS-Wide Combined Management Program for Century Date Changes and the 1999 Filing Season.</u>

The IRS' Y2K efforts included identifying all system components and assigning them to one of the conversion phases. The components that had not been assigned to a conversion phase fell into two groups: uncommitted components and components scheduled for retirement.

Uncommitted components

Uncommitted components are those for which no decision whether to convert or retire has been made. Uncommitted components consist of IRS developed applications as well as personal computer COTS products.

As of February 20, 1998, the IRS had 250,239 uncommitted components. Ninety-two percent (231,103) of the IRS' total inventory of uncommitted components consisted of personal computer COTS products.

The IRS initiated an effort to clean-up the inventory of hardware and software on its inventory system, known as the Integrated Network and Operations Management System (INOMS). This clean-up activity involved standardization of product names and assignment of organizational ownership on INOMS.

Components scheduled for retirement

Components scheduled for retirement had to be retired by January 31, 1999.

As of February 20, 1998, the IRS had 11,547 components scheduled to be retired. The Century Date Change (CDC) Project Office mandated that all components scheduled for retirement be retired by January 31, 1999.

Results

IS and field and customer organizations generally made logical and sound decisions when evaluating the need to retire or convert their computer components. However, we identified several areas where greater emphasis is needed.

The Decision-Making Process to Retire or Convert Personal Computer Components in Regions and Service Centers Was Not Completed

Accelerating the retirement and conversion process for personal computer products

The CDC Project Office established a deadline of September 30, 1998, for field and customer organizations to make their conversion and retirement decisions.

Management has responded to concerns raised in our July 1998 memorandum.

In a July 1998 Audit memorandum, we identified the following concerns that indicated the retirement and conversion process needed to be accelerated. IRS management has addressed our concerns and is taking the proper corrective actions.

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- *As of May 1998, we were informed that disposition of approximately 44,000 personal computer workstations needed to be determined.*

  The location of these workstations had not been determined. The decisions whether to upgrade or replace them had also not been made.

- *The decision-making process to retire or convert personal computer products in the regions and service centers was not completed.*

  Inventory data concerning personal computer products was distributed to the regions and service centers in late May 1998. The decision-making process to determine the retirement or conversion status of individual COTS products began at that time.

- *Ownership and conversion responsibility for large numbers of personal computer COTS software were shifted to the regions and service centers in May 1998, which we believe resulted in a significant workload.*

The original plan was for the CDC Project Office to assume ownership and conversion responsibility for all personal computer software products. However, we found that ownership for 3,647 software products (58 percent of all personal computer products) were transferred to field and customer organizations in the regions and service centers.

Actions were needed to accelerate the retirement and conversion process for personal computer products, so that the IRS would have sufficient time to remedy any unforeseen conversion problems.

Developing cost estimates for the highest priority COTS hardware and software products

The cost of upgrades and/or replacements could not be determined until all personal computer workstations were identified and decisions were made whether to retire or convert.

Budgeting for upgrading and/or replacing personal computer COTS hardware and software relies heavily on accurate and complete cost estimates.

Amounts totaling $8.1 million for Fiscal Year (FY) 1998 and $11 million for FY 1999 were originally budgeted for upgrading and/or replacing personal computer COTS hardware and software.

A complete cost assessment was not expected until the inventory was completely standardized; organizational ownership was determined; and cost estimates from responsible organizations were compiled.

Modifying INOMS to accurately reflect the status of the hardware components in field and customer organizations

INOMS needed to be modified to show the status of "stand-alone" components.

Decisions to classify a COTS product as a "stand-alone" computer (not connected to a network) could not be recorded on INOMS because it did not contain a category for classifying the component as "stand-alone."

The addition of a "stand-alone" category enables field and customer organizations to identify COTS hardware and software components that should not have a

significant impact on the processing or customer service functions because they are not connected to networks.

Recommendations

1. Accelerate the process for making retirement and conversion decisions for uncommitted personal computer products.

2. Ensure that INOMS is modified to accurately reflect the status of hardware components in field and customer organizations by implementing a disposition code of "S" for "stand-alone" machines.

3. Develop a targeted cost estimate for the highest priority COTS hardware and software products and secure funding for these products.

Accelerating the retirement and conversion process for personal computer products provides additional time to remedy any unforeseen problems.

Management's Response

The Project Office will continue to leave the decision to retire any COTS software, with ten or fewer copies, to the discretion of field and customer organizations. It will also track the uncommitted personal computer COTS product identification process going on in field and customer organizations until resolution.

The Project Office will obtain enterprise licenses for all standard COTS software and take these products through the 14-step process to certify that they are Y2K compliant.

The personal computer hardware and software budget was finalized. The estimate was developed based upon estimates for acquisitions provided by the Technical Contract Management Division. Budget Item Submissions (BISs) have been prepared and submitted to the CDC Project Office's Budget Planning & Reporting Section.

The CDC Project Office introduced and implemented the use of the "stand-alone" indicator (S).

Certain Computer Components Identified as Retired Within One Information Systems Function Were Not Accurately Classified

Retired components in one IS function are not always accurately classified on INOMS.

We found 7 (18 percent) of 39 components in our test classified as retired on INOMS that were actually being converted. The planned dispositions of the seven components were later corrected on INOMS from "retired" to "converted" and again from "converted" to "no Y2K impact." As of February 20, 1998, a total of 1,956 components were classified as retired on INOMS in the System Support Division.

The seven misclassified components were originally classified as "retired," reclassified to "converted" and changed again to having "no Y2K impact." If these components are still misclassified and are not made Y2K compliant, they may corrupt compliant programs.

The components perform a variety of tasks including a transmittal system, a program that overlays files, a job control language that allows an operating system to do multiple tasks, a security library, and a program that clips files together.

The misclassification of these components indicated that INOMS did not accurately reflect the number of components being converted as well as the number of components with noY2K impact in the System Support Division.

Recommendation

4. Review the status of all components classified as "retired" in the Systems Support Division. Place any components which will be converted or which have no Y2K impact into their proper status on INOMS and update the conversion milestone dates for all components undergoing conversion.

<u>**Management's Response**</u>

Management agreed that the System Support Division would review the status of all components classified as "retired." They will place any components which will be converted or which have no Y2K impact into their proper status on INOMS, and will update the conversion milestone dates for all components undergoing conversion.

Computer Components Identified as "To Be Retired" Were Not Removed from Active Systems Prior to Service Center Mainframe Consolidation

We found no instructions or uniform procedures being followed regarding the transfer of retired components from two service centers, Kansas City Service Center (KCSC) and Atlanta Service Center (ATSC), to the Tennessee Computing Center (TCC), that ensure these components were properly identified as "to be retired."

Both the KCSC and ATSC were designating local components which they anticipated would not be used after they were sent to TCC as "to be retired." These components were not expected to be removed from production until January 31, 1999.

The CDC Project Management Plan provided that:

- The components not assigned to a phase be counted as uncommitted unless they are, or will be, designated for retirement.

- "To be retired" components are those that were scheduled to be removed on January 31, 1999.

- The CDC Project Office planned to verify the removal of the retired components from inventory.

Uniform procedures and instructions for transferring components that are "to be retired" to TCC and MCC may improve the retirement process.

If retired components with an unconverted date field are transferred to the TCC without being properly identified, there is the potential that they could be inadvertently used and cause problems with existing systems. This risk may be compounded as the remaining service centers begin transferring their mainframe operations to the TCC and the Martinsburg Computing Center (MCC).

Kansas City Service Center

We identified 178 retired components at the KCSC as of February 20, 1998. Of these components, 147 (83 percent) were Tier 1 components. Tier 1 refers to mainframe computers and associated software.

Components that are being classified as "to be retired" were not always being removed from active systems and production libraries prior to service center mainframe consolidation.

Both the Director and the Y2K Coordinator at KCSC expressed concerns that retired components being forwarded to the TCC were not being separated to prevent their inadvertent use.

Four of the six components we tested were retired Tier 1 components that were scheduled to be transferred to the TCC as part of the IRS service center mainframe consolidation.

All four components reviewed have been identified on the inventory system as "to be retired" and currently reside on active systems. Three of the four components were still in use. One had a date field and was last used in 1994.

The KCSC retired components will not be placed in retired or archived directories that would prevent their inadvertent use. When mainframe systems and programs are transferred to the TCC, the retired components will also be transferred.

*If components identified as "to
be retired" are not removed
from active systems, they may
be inadvertently used at a
later date by the TCC,
potentially causing
operational disruptions.*

Since the TCC will have possession of the transferred
KCSC components in January 1999, TCC would have to
perform any necessary actions to remove these retired
components from inventory.

However, the components designated as retired may not
be readily identifiable to the TCC because the
transferred KCSC file directories did not place retired
components into a separate directory before the transfer.

Atlanta Service Center

As of February 20, 1998, there were 1,702 retired
components at the ATSC, of which 359 (21percent)
were Tier 1 components.

Twelve (23 percent) of the 53 components tested were
found to be retired Tier 1 components that were to be
transferred to the TCC. None of the 12 components had
been removed from the tape library at ATSC. Seven
(58 percent) out of 12 of the components identified as
"to be retired" were still in use. Nine of these 12
components contained a date field, the other 3 did not.

However, ATSC alerted the TCC to the existence of
these components through issuance of a Service Level
Agreement (SLA). This SLA included a listing of all
transferred components that needed to be retired.

In the case of ATSC, placing retired components into
directories may not be necessary due to the rescheduling
of its mainframe consolidation until 2000. ATSC
management has advised that retired Tier 1 and Tier 2
components were to be removed from active libraries by
January 31, 1999, before the new consolidation date.

Recommendations

5. The CDC Project Office needs to develop
    instructions regarding the transfer of retired
    components from the service centers to the
    computing centers to ensure that these components
    are properly identified as "to be retired."

6. Procedures should be implemented at the service centers to separate retired components into archived or obsolete directories before their transfer to the computing centers.

Management's Response

The Assistant Commissioner for IS National Operations (IS:O) will issue instructions for transferring retired components from the service centers to the computing centers. All components that are being retired will be transferred to their computing center along with a certification letter that states that the component is actually being retired.

Conclusion

Our review of the IRS' Year 2000 efforts for retired and uncommitted components showed that IS and field and customer organizations generally made logical and sound decisions when evaluating the need to retire or convert their computer components.

The IRS needs to provide added emphasis in the following areas:

- Ensuring that final decisions are made on whether to retire or convert computer components.

- Ensuring that certain components identified as retired in one IS function are accurately classified on INOMS.

- Ensuring that components identified as "to be retired" are being removed from active systems and production libraries before mainframe consolidation.

The IRS has initiated corrective actions in these areas.

**The Internal Revenue Service Needs Additional Emphasis on Computer
Component Retirement Decisions To Be Ready For The Year 2000**

Appendix I

Detailed Objective, Scope, and Methodology

The objective of this review was to assess the Internal Revenue Service's (IRS) efforts to account for retired components and to resolve uncommitted components, those for which no convert/retire decision had been made.

To accomplish this objective, we:

I.   Evaluated the IRS' efforts to determine whether decisions which have been made to retire Information Systems (IS) and non-IS components were proper.

   A.   Contacted the Century Date Change (CDC) Project Office for any national guidance which had been issued concerning procedures for retiring IS and non-IS components, criteria to be used, and documentation required to support the retirement decisions.

   B.   Held discussions with National Office IS and field and customer organization management to determine procedures for making and documenting retirement decisions for IS and non-IS components.

   C.   Reviewed data concerning the ratio of component retirements to component conversions to identify significant trends in the number of retirements in the IS and non-IS functions.

   D.   Conducted verifications of a sample of retired components.

      1.   Reviewed documentation supporting the actual retirement of the components or the scheduled retirement of the components, including retirement justifications and retirement dates.

      2.   From a total population of 9,544 retired IS components, we selected a statistically valid random sample from the inventory database called the Integrated Network and Operations Management System (INOMS). This sample selection resulted in a total sample size of 199 components located in IS. We also judgmentally sampled 156 components located in field and customer organizations, including the IRS service centers. Our review included two service centers (Atlanta and Kansas City) that were involved in transferring retired components to the Tennessee Computing Center as part of the IRS service center mainframe consolidation process.

      3.   Assessed the retirement decisions for the sampled components.

        a.   Determined whether IS and field and customer organizations made logical and sound decisions when evaluating the need to retire or convert their components.

        b.   For components that were listed as retired on the inventory database, reviewed documentation to determine whether the components had been removed from production.

II.   Determined whether plans to address the conversion of commercial off-the-shelf (COTS) products had been put into place.

    A. Evaluated efforts underway to reduce the number of uncommitted COTS products.

        1. Held discussions with CDC Project Office management to evaluate the progress regarding decisions on uncommitted personal computer COTS products in inventory.

        2. Reviewed Requests for Information Services and Conversion Request Memoranda issued to IS and field and customer organizations.

        3. Monitored the accomplishment of project milestones that had been identified for the personal computer COTS conversion effort.

        4. Evaluated the progress of the INOMS clean-up and personal computer COTS conversion efforts relating to uncommitted personal computer COTS products.

The Internal Revenue Service Needs Additional Emphasis on Computer Component Retirement Decisions To Be Ready For The Year 2000

Appendix II

Major Contributors To This Report

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Management's Response to the Draft Report

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

FEB −8 1999

MEMORANDUM FOR TREASURY INSPECTOR GENERAL
FOR TAX ADMINISTRATION

FROM: David W. Junkins
             Director, Office of Information Resources Management IS:IR

SUBJECT: Management Response to Draft Internal Audit Report- Review
             of Year 2000 Efforts for Retired and Uncommitted Components

The Director Year 2000 Program, the Assistant Commissioner for Systems
Development, the Assistant Commissioner for IS National Operations, and the Assistant
Commissioner for IS Service Center Operations, have reviewed the subject draft
Internal Audit Report and provide the attached management response which addresses
Recommendations 4, 5 and 6. Recommendations 1, 2 and 3 were addressed in our
December 21, 1998, management response to Internal Audit Memorandum #1 for this
audit.

If you have any questions, please call me on (202) 283-4060, or have a member of your
staff call Donna Downing on (202) 283-4159.

Attachment

cc: Director, Office of Audit Projects

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

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DEC 21 1998

Chief Inspector

MEMORANDUM FOR CHIEF INSPECTOR

FROM: David W. Junkins
                Director, Office of Information Resources Management IS:IR

SUBJECT: Internal Audit Review of Year 2000 Efforts for Retired,
                Uncommitted and Archived Components (Audit 980049) -
                Memorandum #1

The Information Systems organization has reviewed the subject memorandum and provided the attached management response.

If you have any questions, or need additional information, please feel free to call me on (202) 283-4060 or have a member of your staff call Donna Downing on (202) 283-4159.

Attachment

Response to Draft Internal Audit Memorandum
Review of Year 2000 Efforts for Retired, Uncommitted and Archived Components
(Audit 980049) - Memorandum #1

Recommendation 1

The Century Date Change (CDC) Project Office needs to accelerate the process for making retirement and conversion decisions for Tier 3 COTS products by issuing a directive to Field and Customer organizations to retire any COTS software product with ten or fewer copies.

Assessment of Cause

Internal Audit stated, "An overall plan to address the Tier 3 infrastructure and Tier 3 COTS products was implemented in November 1997. As a result of the recent INOMS clean up, approximately 8000 Tier 3 COTS products have been identified. Organizational ownership for these products within Field and Customer organizations was determined based on a frequency distribution of software and hardware products. Inventory data concerning Tier 3 COTS products has been distributed to the regions and service centers.

...we are concerned that the Service may not be moving quickly enough to effectively address the issue of making Tier 3 COTS components Y2K compliant."

Decisions to retire or convert Tier 3 COTS products in the regions and service centers have not been made. Procedures for retiring the Tier 3 COTS products assigned to individual regions and districts are still being formulated by the Y2K executives

The CDC Project Office has established a deadline of September 30, 1998, for the Field and Customer organizations to make conversion and retirement decisions. There is still no firm number of Tier 3 products that will be converted or retired.

Corrective Action for Recommendation 1

The Year 2000 Tier 3 Project Office will continue to leave the decision to retire any COTS product software, with ten or fewer copies, to the discretion of the Field and Customer organizations. It is at the discretion of the Field and Customer organizations what they need to keep. Enterprise licenses for all standard products are being provided. The standard software products will be taken through the 14-Step Y2K process by the Year 2000 Tier 3 Project Office to certify that they are Y2K compliant.

Response to Draft Internal Audit Memorandum
Review of Year 2000 Efforts for Retired, Uncommitted and Archived Components
(Audit 980049) - Memorandum #1

<u>Corrective Action for Recommendation 1 (continued)</u>

The Year 2000 Tier 3 Project Office will track the Tier 3 COTS product identification process going on in the Field and Customer organizations until resolution. As of September 30, 1998, 39.94 percent of the 719,885 Tier 3 COTS products have been identified. The Year 2000 Tier 3 Project Office expects that as the remaining (432 products) and any additional products coming in will be standardized, assigned ownership and determinations made to either upgrade or replace them.

<u>Implementation Date</u>

Completed: <u>September 30, 1998</u>   Proposed:

<u>Responsible Official</u>

Chief Information Officer IS
Deputy Chief Information Officer for Operations IS
AC/ National Operations IS:O
Director, Strategic Projects Office

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Response to Draft Internal Audit Memorandum
Review of Year 2000 Efforts for Retired, Uncommitted and Archived Components
(Audit 980049) - Memorandum #1

Recommendation 2

The Century Date Change (CDC) Project Office should ensure that INOMS is modified to accurately reflect the status of hardware components in Field and Customer organizations by implementing a disposition code of "S" for "stand alone" machines.

Assessment of Cause

Internal Audit stated, "...decisions to classify a COTS product as a "stand alone" component cannot be recorded on INOMS because the Product Milestone and Device Tables do not contain an "S" category for classifying the component as stand alone."

Corrective Action for Recommendation 2

The change to INOMS that introduced the "Stand-Alone" Indicator (S) on Hardware (device) Platform records was implemented on 8/28/98. On that date the Century Date Change Office implemented INOMS Release 8.0, which included Ticket Number 392269 deploying the CDCPO Requirements Change Request (RCR) for Isolate and Stand-Alone.

Implementation Date

Completed: August 8, 1998.   Proposed:

Responsible Official

Chief Information Officer IS
Deputy Chief Information Officer (Systems) IS
Director, Century Date Change Project Office IS:CD

3

The Internal Revenue Service Needs Additional Emphasis on Computer Component Retirement Decisions To Be Ready For The Year 2000

Response to Draft Internal Audit Memorandum
Review of Year 2000 Efforts for Retired, Uncommitted and Archived Components
(Audit 980049) - Memorandum #1

Recommendation 3

The Century Date Change (CDC) Project Office needs to develop a targeted cost estimate for its highest priority COTS hardware and software products and secure funding for these products.

Assessment of Cause

Internal Audit stated, "The cost of the upgrade and/or replacement cannot be determined until the workstations are identified and decisions are made to retire or convert.

Amounts totaling $8.1 million for FY 1998 and $11 million for FY 1999 have been budgeted for upgrading and/or replacing Tier 3 COTS hardware and software. However, the adequacy of these budget amounts cannot be determined at this time."

Corrective Action for Recommendation 3

The Tier 3 COTS hardware and software budget has been finalized. Their estimate of $31 million was developed based on estimates for acquisitions provided by the Technical Contract Management Division (IS:PM:C). These estimates Budget Item Submissions (BISs) have been prepared and submitted to the CDC Project Office's Budget Planning & Reporting Section.

Implementation Date

Completed: November 1, 1998   Proposed:

Responsible Official

Chief Information Officer IS
Deputy Chief Information Officer (Operations) IS
AC/ National Operations IS:O
Director, Strategic Projects Office

4

The Internal Revenue Service Needs Additional Emphasis on Computer Component Retirement Decisions To Be Ready For The Year 2000

Management Response to Draft Internal Audit Report-
Review of Year 2000 Efforts for Retired and Uncommitted Components
(Audit #980049)

Recommendation # 4

The Information Systems (IS) Systems Support Division needs to review the status of all components classified as "retired" on the Application Program Registry (APR), place any components which will be converted or which have no Y2K impact into their proper status on INOMS, and update the conversion milestone dates for all components undergoing conversion.

Assessment of Cause

Internal Audit found that seven of 39 (17.9%) components from the Systems Support Division, IS:S:SS, in their random sample classified as retired on INOMS were shown as converted. Six of the seven did not show any progress with respect to the 14-step conversion process. These seven components were subsequently changed to a status reflecting no Y2K impact.

The IA findings reflect the changing nature of the data processing environment. Components were retired due to being one time tests, old versions, or having been replaced by other software products. Components were "unretired" when identified as still being in use or still being required when new software failed to provide required functionality, unrelated to Y2K changes. The systems software components reflect entries made by both National Office and field sites; this has led to an ongoing process to resolve discrepancies.

The changes to these components reflect the fact that there is an ongoing process in which components are updated when their status is changed. When a component is moved from retired to active, the proper steps are then followed to ensure that the component is reviewed and corrective action taken, if needed.

Corrective Action # 4

The Systems Support Division, IS:S:SS, will review the status of all components classified as "retired" on the Application Program Registry (APR) and place any components which will be converted or which have no Y2K impact into their proper status on INOMS, and update the conversion milestone dates for all components undergoing conversion.

1

The Internal Revenue Service Needs Additional Emphasis on Computer Component Retirement Decisions To Be Ready For The Year 2000

**Management Response to Draft Internal Audit Report-
Review of Year 2000 Efforts for Retired and Uncommitted Components
(Audit #980049)**

Implementation Date for Corrective Action # 4

Completed: _____   Proposed: __04-01-99__
                                The Systems Support Division will
                                review the APR for "retired" components
                                and place any to be converted or which
                                have no Y2K impact into their proper
                                status on INOMS.

Responsible Official for Corrective Action # 4

Chief Information Officer IS
Deputy Chief Information Officer (Systems) IS
Assistant Commissioner for Systems Development IS:S

2

The Internal Revenue Service Needs Additional Emphasis on Computer Component Retirement Decisions To Be Ready For The Year 2000

Management Response to Draft Internal Audit Report-
Review of Year 2000 Efforts for Retired and Uncommitted Components
(Audit #980049)

Recommendation # 5

The CDC Project Office needs to develop instructions regarding the transfer of retired components from the service centers to the computing centers to ensure that these components are properly identified as "to be retired".

Assessment of Cause

A process needs to be implemented in which all components that are actually "retired" are segregated into archived or obsolete directories prior to transfer to the computing centers. Instructions have not been issued to address the implementation of a process.

Corrective Action # 5

The Assistant Commissioner for IS National Operations (IS:O) will issue instructions for transferring retired components from the service centers to the computing centers.

Implementation Date for Corrective Action # 5

Completed _____

Proposed: __04-01-99__
The A/C IS National Operations will issue instructions for transferring retired components from the service centers to the computing centers.

Responsible Official for Corrective Action # 5

Chief Information Officer IS
Deputy Chief Information Officer (Operations) IS
Assistant Commissioner for IS National Operations IS:O

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**Management Response to Draft Internal Audit Report-
Review of Year 2000 Efforts for Retired and Uncommitted Components
(Audit #980049)**

Recommendation # 6

Procedures should be implemented at the service centers to segregate retired components into archived or obsolete directories prior to their transfer to the computing centers.

Assessment of Cause

The Kansas City Service Center retired components were not placed in retired or archived directories that would prevent their inadvertent use. The Kansas City Service Center retired mainframe programs were transferred to the Tennessee Computing Center (TCC) as production code.

Corrective Action # 6

The seven remaining service centers to be consolidated will adhere to the instructions to be issued by the Assistant Commissioner for IS National Operations. The existence of the obsolete and archived components will be documented through the issuance of a certification letter by the Assistant Commissioner for IS Service Center Operations.

Implementation Date for Corrective Action # 6

Completed _____

Proposed: __06-01-99__
All components that are being retired will be transferred to their computing center along with a certification letter that states that the component is actually being retired.

Responsible Official for Corrective Action # 6

Chief Information Officer IS
Deputy Chief Information Officer (Operations) IS
Assistant Commissioner for IS Service Center Operations IS:SC

4

Glossary Of Terms

14-Step Process: This process includes identifying items for conversion, performing impact analysis to assess the scope of conversion requirements, performing the actual conversion work and testing.

Active Systems: A collection of devices and associated applications organized for a common or designated purpose. At a minimum, a computer system should include hardware and software devices and an operating system. Active systems are systems currently in use.

Century Date Change (CDC) Project Office: The full-time, central coordinating organization that is responsible for managing the Year 2000 compliance project.

Commercial off-the-shelf (COTS) Products: Hardware and software devices developed by a vendor to support specific functional and technical demands.

Components: A unique item of software or hardware.

Device: An instance or occurrence of a product in the Internal Revenue Service's (IRS) computer inventory system (each specific deployment of a product). For software, this is defined by manufacturer product, version, release, and serial number. For hardware, it is defined by manufacturer product, model, and serial number.

Integrated Network and Operations Management System (INOMS): The IRS' computer inventory system.

IS and Non-IS Components: IS stands for Information Systems and non-IS represents the field and customer service functions. Therefore, an IS component would be a unique item of software or hardware for Information Systems.

Milestone: The completion of an activity within a process that is used to measure progress.

Production Libraries: These libraries contain all the current computer applications required to complete a task.

Service Center Mainframe Consolidation: A key component of the IRS' restructuring plan where fewer processing sites will process taxpayers' information to the IRS' main computer.

Tier 1: Mainframe computer and its associated software.

Tier 2: Minicomputers and their associated software. These computers are generally larger than microcomputers and usually serve as a server on a computer network.

Tier 3: Microcomputers and their associated software. Tier 3 computers are used in a desktop environment such as a personal computer, laptop or workstations capable of functioning alone or connected to other computers.

Year 2000 (Y2K) Compliant: The impending Year 2000 millennium change and its resultant impact and potential disruptions of business services, information databases, and application systems.